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CLAIMS

1   1.   A method for identifying resources associated with a communications network, the

2   method comprising:

3   defining a structured address format having a plurality of address segments, each

4   address segment being associated generally with one or more properties of a managed

5   resource of the communications network; and

6   assigning to the managed resource a structured address constructed according to

7   the structured address format, each address segment of the assigned structured address

8   having a value that conveys information about one or more properties of the managed

9   resource.

1   2.   The method of claim 1, further comprising assigning a name to the managed resource and

2   associating the name with the structured address assigned to the managed resource.

1   3.   The method of claim 2, further comprising translating between the name and the

2   structured address assigned to the managed resource using a domain name system

3   service.

1   4.   The method of claim 1, further comprising storing the structured address in an inventory

2   system used by an operations system support (OSS) to support the communications

3   network.

4   5.   The method of claim 1, further comprising storing the structured address at a network

5   element in the communications network.

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1   6.   The method of claim 1, further comprising transmitting the structured address assigned to

2   the managed resource over the communications network in a packet.

1   7.   The method of claim 1, further comprising producing by a network element in the

2   communications network a report containing the structured address assigned to the

3   managed resource.

1   8.   The method of claim 1, wherein a value assigned to one of the address segments in the

2   structured address operates to identify a zone in the communications network to which

3   service traffic can be transported.

1   9.   The method of claim 1, wherein a value assigned to one of the address segments of the

2   structured address operates to identify a type of service.

1   10.   The method of claim 1, wherein a value assigned to one of the address segments of the

2   structured address operates to identify a transmission bit rate for service traffic over the

3   communications network.

1   11.   The method of claim 1, wherein the private communications network includes one of an

2   optical network, an Ethernet network, and an Internet Protocol network.

1   12.   The method of claim 1, wherein the structured address format includes a dotted decimal

2   notation.

1   13.   The method of claim 1, wherein the managed resource is a data service and the structured

2   address operates as a service identifier.

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1   14.   The method of clam 1, wherein the managed resource is a path through the

2   communications network over which service traffic is transported and the structured

3   address operates as a path identifier.

1   15.   The method of claim 1, wherein the structured address is a private address.

1   16.   The method of claim 1, wherein the structured address format is a first structured address

2   format, and further comprising translating the structured addresses defined according to

3   the first structured address format into structured addresses defined according to a second

4   structured address format.

1   17.   The method of claim 1, further comprising querying a network element in the

2   communications network to take an inventory of managed resources based on structured

3   addresses recorded by the network element.

1   18.   The method of claim 1, wherein the communications network supports circuit-based

2   communications, packet-based communications, or a combination thereof.

1   19.   The method of claim 1, further comprising incorporating the structured address assigned

2   to the managed resource in an inventory system of an operations support system.

1   20.   The method of claim 1, further comprising:

2   associating a first circuit identifier with a path by which traffic of a service is

3   transported over the communications network; and

4   associating the structured address with the first circuit identifier.

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1 21. The method of claim 20, further comprising:

2   associating a second circuit identifier with the path; and

3   associating the structured address with the second circuit identifier.

1 22. The method of claim 20, further comprising:

2   associating a second circuit identifier with a second path by which traffic of the

3 service is transported over the communications network; and

4   associating the structured address with the second circuit identifier.

1 23. An inventory system for managing resources of a private communications network, the

2 inventory system comprising:

3   a structured address format having a plurality of address segments, each address

4 segment being associated generally with one or more properties of a managed resource of

5 the private communications network; and

6   means for assigning to the managed resource a structured address constructed

7 according to the structured address format, each address segment of the assigned

8 structured address having a value that conveys information about one or more properties

9 of the managed resource.

1 24. The inventory system of claim 23, further comprising means for translating structured

2 addresses defined according to the structured address format into structured addresses

3 defined according to a second structured address format.

1 25. The inventory system of claim 23, further comprising means for associating a name with

2 the structured address assigned to the managed resource.

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1   26.   The inventory system of claim 25, further comprising means for translating between the

2   name and the structured address assigned to the managed resource.

1   27.   An operations support system, comprising:

2   means for defining a structured address format having a plurality of address

3   segments, each address segment being associated generally with one or more properties

4   of a managed resource of a private communications network; and

5   means for assigning to the managed resource a structured address constructed

6   according to the structured address format, each address segment of the assigned

7   structured address having a value that conveys information about one or more properties

8   of the managed resource.

1   28.   The inventory system of claim 27, further comprising means for translating structured

2   addresses defined according to the structured address format into structured addresses

3   defined according to a second structured address format.

1   29.   The inventory system of claim 27, further comprising means for associating a name with

2   the structured address assigned to the managed resource.

1   30.   The inventory system of claim 29, further comprising means for translating between the

2   name and the structured address assigned to the managed resource.